UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *14 February 2008*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-5,7-13,16-19 and 22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-5,7-13,16-19 and 22* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the Amendment filed 2/14/08. Claims 6, 14,

15, 20, and 21 have been cancelled. New claim 22 has been added. Claims 1-5, 7-13,

16-19, and 22 are currently pending in the application.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claim 7 recites the limitation "the adjusting step" in line 9. Since there is no prior

mention of an "adjusting step", there is insufficient antecedent basis for this limitation in

the claim. It is recommended that the claim be amended such that there is proper

antecedent basis for the term "the adjusting step".

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 13 and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Meehan et al. (U.S. Pat. 6909753).

With respect to claim 13, Meehan et al. discloses a method for communicating data representing a media object **(See the abstract and column 3 lines 43-57 of Meehan et al. for reference to a method for communicating data representing a video stream, which is a media object)**. Meehan et al. also discloses determining network conditions **(See column 6 lines 36-54 of Meehan et al. for reference to determining signal quality, which corresponds to determining network conditions)**. Meehan et al. further discloses transmitting prioritized data in accordance with network conditions **(See column 5 line 36 to column 6 line 46 and Figure 1 of Meehan et al. for reference to transmitting prioritized data in accordance with the signal quality)**. Meehan et al. further discloses that the prioritized data is generated as a composition of classified data representing at least one base layer and at least one enhancement layer with parity data being associated with each layer **(See column 5 line 36 to column 6 line 46 and Figure 1 of Meehan et al. for reference to the data including both base layer and enhancement layer information with each layer have an associated error correction code, which includes parity data)**. Meehan et al. also discloses determining the composition of transmitted base layer information with associated parity data and transmitted enhancement layer information with associated parity data in response to network conditions **(See column 6 lines 36-62 of Meehan et**

al. for reference to changing the composition of transmitted base layer information, enhancement layer information, and associated error correction code information in response to network signal quality). Meehan et al. further discloses increasing an amount of data associated with the enhancement layer and decreasing an amount of data associated with the base layer parity data when network conditions result in low network loss **(See column 6 lines 43-62 of Meehan et al. for reference to increasing the bit rate of the enhancement layer, thereby increasing enhancement layer data, and reducing the amount of ECC of the base layer, thereby reducing base layer parity data when a signal quality indicator indicates a good bit error rate meaning network conditions result in low network loss)**. Meehan et al. also discloses decreasing an amount of data associated with the enhancement layer and increasing an amount of data associated with the base layer parity data when network conditions result in a high network data loss **(See column 6 lines 43-62 of Meehan et al. for reference to not mapping enhancement layer data, thereby decreasing an amount of enhancement layer data, and increasing the amount of ECC of the base layer when, thereby increasing base layer parity data a signal quality indicator indicates a bad bit error rate meaning network conditions result in a high network loss)**.

    With respect to claim 16, Meehan et al. discloses that the data is sent in the form of packets **(See column 5 line 59 to column 6 line 34 of Meehan et al. for reference to transmitting data in the form of packets)**.

With respect to claim 17, Meehan et al. discloses packing data packets with more enhancement layer information with associated parity data when space is available **(See column 6 lines 47-62 of Meehan et al. for reference to reducing the amount of enhancement layer information and associated error correction code when communication quality is bad, meaning that the amount of enhancement layer information and associated error correction code must be increased during times when the communication quality is not bad and more space is available)**.

With respect to claim 18, Meehan et al. discloses changing the composition of data transmitted in response to a request from a decoder **(See column 6 liens 35-62 for reference to a decoded using a feedback control signal to request a change in the composition of data transmitted)**.

With respect to claim 19, Meehan et al. discloses that the network conditions considered during the transmission and adjustment step comprise an actual loss and a change in the actual loss of transmitted data **(See column 6 lines 43-46 of Meehan et al. for reference to the signal quality indicator including a bit error rate value, which corresponds to an actual loss of transmitted data)**.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-4, 7, and 10-12 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Meehan et al. in view of Cohen et al. (U.S. Pat. 7095782 B1).

With respect to claim 1, Meehan et al. discloses a method for communicating

data representing a media object encoded into classified data representing base layer

information and enhancement layer information through a network fabric **(See the**

abstract, column 3 lines 43-57, and column 6 lines 28-35 of Meehan et al. for

reference to a method for communicating data representing a video stream,

which is a media object, encoded into classified data having a base layer and at

least one enhancement layer). Meehan et al. also discloses transmitting a

composition of the classified data as prioritized data in response to network conditions

wherein the classified data comprises at least one base layer information with

associated base layer parity information at least one enhancement layer with associated

enhancement layer parity information **(See column 5 line 36 to column 6 line 46 and**

Figure 1 of Meehan et al. for reference to transmitting a prioritized composition of

data in response to a signal quality indicator, which is an indication of network

conditions, where the data comprises base layer information with an associated

base layer error correction code, which is parity information, as well as

enhancement layer information, with associated enhancement layer error

correction code). Meehan et al. further discloses adjusting a composition of prioritized

data for transmission in response to a change in network conditions resulting in a loss of

data on the network **(See column 6 lines 16-62 of Meehan et al. for reference to**

changing the composition of transmitted data in response to a change in a signal

quality indicator indicating a bit error rate, which is a rate of data loss on the

network). Meehan et al. also discloses reducing an amount of the enhancement layer

data and increasing an amount of the base layer parity data **(See column 6 lines 43-62**

of Meehan et al. for reference to not mapping enhancement layer data, thereby

reducing an amount of enhancement layer data, and increasing the amount of

ECC of the base layer when, thereby increasing base layer parity data a signal

quality indicator indicates a bad bit error rate meaning network conditions result

in a high network loss). Meehan et al. does not specifically disclose that the amount

of base layer data stays the same during the adjusting.

        With respect to claim 7, Meehan et al. discloses a method for communicating

data representing a media object encoded into classified data representing base layer

information and enhancement layer information through a network fabric **(See the**

abstract, column 3 lines 43-57, and column 6 lines 28-35 of Meehan et al. for

reference to a method for communicating data representing a video stream,

which is a media object, encoded into classified data having a base layer and at

least one enhancement layer). Meehan et al. also discloses transmitting a

composition of the classified data as prioritized data in response to network conditions

wherein the classified data comprises at least one base layer information with

associated base layer parity information at least one enhancement layer with associated

enhancement layer parity information **(See column 5 line 36 to column 6 line 46 and**

Figure 1 of Meehan et al. for reference to transmitting a prioritized composition of

data in response to a signal quality indicator, which is an indication of network

conditions, where the data comprises base layer information with an associated

base layer error correction code, which is parity information, as well as

enhancement layer information, with associated enhancement layer error

correction code). Meehan et al. further discloses reducing an amount of the base

layer parity data and increasing an amount of the enhancement layer data forming the

composition of priority data when network conditions are favorable for rendering the

media object (See column 6 lines 43-62 of Meehan et al. for reference reducing the

amount of ECC of the base layer, thereby reducing base layer parity data, and

increasing the bit rate of the enhancement layer, thereby increasing enhancement

layer data, when a signal quality indicator indicates a good bit error rate meaning

network conditions are favorable). Meehan et al. does not specifically disclose that

the amount of base layer data stays the same during the adjusting.

With respect to claims 1 and 7, Cohen et al, in the field of communications,

discloses adjusting an amount of base layer parity data and enhancement layer data

while having the amount of base layer data stay the same during the adjusting (See

column 2 line 57 to column 3 line 22, column 3 line 59 to column 4 line 67, and

Figure 3 of Cohen et al. for reference to a method of transmitting the same

amount of base layer data during each time interval while adjusting the amount of

re-transmitted older base-layer bits, which are parity bits used to correct error in

base layer data, and enhancement layer data transmitted during the time interval

such when there is an increase in re-transmitted older base-layer bits there is a

corresponding decrease in transmitted enhancement layer bits and vice versa,

while the amount of base layer bits transmitted during each time interval remains

the same). Transmitting the same amount of base layer data during adjustment in the

amounts of other types of data transmitted has the advantage of allowing the most

important base layer data to maintain a constant bit rate at all times.

It would have been obvious for one of ordinary skill in the art at the time of the

invention, when presented with the work of Cohen et al., to combine transmitting the

same amount of base layer data during adjustment in the amounts of other types of

data transmitted, as suggested by Cohen et al., with the system and method of Meehan

et al., with the motivation being to allow the most important base layer data to maintain

a constant bit rate at all times.

With respect to claim 2, Meehan et al. discloses that the classified data is pre-

encoded **(See column 5 lines 39-45 for reference to the video stream being pre-**

recorded in a standard television format).

With respect to claim 3, Meehan et al. discloses that the transmitting is enabled

by a multimedia server **(See column 1 lines 55 to column 2 line 18 of Meehan et al.**

for reference to transmitting a video stream via a streaming server, which is a

multimedia server).

With respect to claim 4, Meehan et al. discloses using temporal scalability **(See**

column 3 lines 62-65 for reference to using time division modulation, which

corresponds to temporal scalability, to make the channel coding more or less

robust).

With respect to claim 10, Meehan et al. discloses using more than one enhancement layer and associated parity data **(See column 5 line 54 to column 6 line 15 of Meehan et al. for reference to using one or more enhancement layers with associated error correction codes)**.

With respect to claims 11 and 12, Meehan et al. discloses that the network conditions considered during the transmission and adjustment step comprise an actual loss and a change in the actual loss of transmitted data **(See column 6 lines 43-46 of Meehan et al. for reference to the signal quality indicator including a bit error rate value, which corresponds to an actual loss of transmitted data)**.

8.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meehan et al. in view of Cohen and in further view of Van Gestel et al. (U.S. Pat. 5579183).

With respect to claim 5, the combination of Meehan et al. and Cohen et al. does not specifically disclose transmitting data as data packets that are sequentially numbered.

With respect to claim 5, Van Gestel et al., in the field of communications, discloses transmitting data as data packets that are sequentially numbered **(See column 3 lines 47-61 and column 4 lines 13-44 of Van Gestel et al. for reference to transmitting MPEG packets including a packet sequence number)**. Transmitting data as data packets that are sequentially numbered has the advantage of allowing data to be more easily received and decoded in the proper order **(See column 4 liens 13-44 of Van Gestel et al. for reference to the advantage)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Van Gestel et al., to combine transmitting data as data packets that are sequentially numbered, as suggested by Van Gestel et al., with the system and method of Meehan et al. and Cohen et al., with the motivation being to allow to be more easily received and decoded in the proper order.

9.   Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meehan et al. in view of Cohen et al. and in further view of Boyce (U.S Pat. 6317462 B1).

With respect to claim 8, the combination of Meehan et al. and Cohen et al. does not specifically disclose encoding data with a forward error correction code using Reed Solomon codes.

With respect to claim 8, Boyce, in the field of communications, discloses encoding data with a forward erasure correction code using Reed Solomon codes **(See the abstract of Boyce for reference to encoding video data with a systematic forward erasure code such as a Reed Solomon code)**. Encoding data with a forward erasure correction code using Reed Solomon codes has the advantage of providing more robust protection against errors.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Boyce, to combine encoding data with a forward erasure correction code using Reed Solomon codes, as suggested by Boyce,

with the system and method of Meehan et al. and Cohen et al., with the motivation

being to provide more robust protection against errors.

With respect to claim 9, Meehan et al. discloses selecting the composition of

data to be transmitted based on network conditions by accessing a data store

corresponding to data class **(See column 5 line 36 to column 6 line 46 and Figure 1**

of Meehan et al. for reference to data being separated an stored into different

base and enhancement layers and for reference to selecting the composition of

data to be transmitted from the stored base and enhancement layer information

based on signal quality).

10.   Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meehan

et al. in view of Jeon (U.S. Publication US 2002/0154697 A1).

With respect to claim 22, Meehan et al. does not specifically disclose placing B

frames exclusively in the enhancement layer and I and P frames exclusively in the base

layer.

With respect to claim 22, Jeon, in the field of communications, discloses

placing B frames exclusively in the enhancement layer and I and P frames exclusively in

the base layer **(See page 3 paragraphs 28 and 42 and Figure 2C of Jeon for**

reference to placing I and P frames only into the base layer and B frames only

into the enhancement layer). Placing B frames exclusively in the enhancement layer

and I and P frames exclusively in the base layer has the advantage of temporally

separating the frames while transmitting more important frame types in the base layer to

simplify reception of data.

It would have been obvious for one of ordinary skill in the art at the time of the

invention, when presented with the work of Jeon, to combine placing B frames

exclusively in the enhancement layer and I and P frames exclusively in the base layer,

as suggested by Jeon, with the system and method of Meehan et al., with the

motivation being to temporally separate he frames while transmitting more important

frame types in the base layer to simplify reception of data.

Response to Arguments

11.   Applicant's arguments have been considered but are moot in view of the new

ground(s) of rejection.

Conclusion

12.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JASON E. MATTIS whose telephone number is

(571)272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Firmin Backer can be reached on (571)272-6703. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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JEM

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